



ENERGYCONNECT, INC.

**Demand Response Solutions
Proposal for the Commonwealth of Virginia**

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Executive Summary

EnergyConnect, Inc. is pleased to submit this response to the Commonwealth of Virginia's Request for Proposal (RFP) (#87), Folder (#19605), and Commodity Code (91841) for Demand Response Services. As a leading provider of demand response services in the mid-Atlantic region, EnergyConnect is well qualified to provide the Commonwealth of Virginia's Authorized Users with in-depth technical advice and a package of services that maximizes the benefits of participating in all of the demand response programs offered by PJM.

EnergyConnect is a leading provider of Demand Response services and solutions to institutions of higher education, water and waste water treatment plants, prisons, judicial buildings and other public agencies. More than 50 publicly owned facilities currently take advantage of our unique ability to maximize proceeds from sales of Demand Response without adversely impacting important operations. Moreover, by offering a variety of ways to capitalize on the environmental and cost-saving benefits offered by Demand Response, EnergyConnect can help the Commonwealth of Virginia's Participating Agencies match opportunities with their ability to deliver sizable load reduction and other critical services to the greater power grid.

Our proposed services include processing PJM real-time and day-ahead demand response transactions for the Commonwealth through a full-service approach. Services include meter data collection device installation, load reduction strategy identification, demand response participation strategy development, and other technical support services.

EnergyConnect will be partnering with Westridge Energy, a VA-based, SWAM business to supply and install any necessary meter data collection devices in Commonwealth facilities. Westridge has been providing similar services to EnergyConnect in VA for the past two years, and we have established a solid working relationship.

Commonwealth demand response participants will be granted full access to EnergyConnect's web-portal to initiate demand response transactions, and view timely baselines and financial settlement information via the internet. If desired by the Commonwealth, EnergyConnect could link our portal to a designated Commonwealth demand response web-site to allow the Commonwealth to disseminate additional energy efficiency information to demand response participants.

In an effort to encourage demand response enrollment across the Commonwealth, EnergyConnect is offering to serve all Commonwealth facilities, not just the large energy consumers. We are proposing a simple performance-based commission of 15% to all Commonwealth agencies.

EnergyConnect will also advance qualified participating agencies up to \$10,000 for facility upgrades and/or data collection devices that facilitate demand response revenue, in order to accelerate the Commonwealth's participation in the demand response markets.

EnergyConnect's goal is to help the Commonwealth of Virginia operate effectively in demand response, with increasing levels of load shifting to maximize the revenue potential while having the ability to choose which level of service best fit their needs.

1 PURPOSE AND BACKGROUND

No response required.

2 STATEMENT OF NEEDS

This section contains a list of services to be provided pursuant to the Statement of Needs in section 2 of the RFP.

- 2.1 The Commonwealth requires the services of an experienced, Qualified Curtailment Service Provider to provide Demand Response Services as associated with PJM “Load Response Program (LRP)”. PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. Proposals shall address cost reduction and how costs and cost reduction are allocated to the Contractor and Commonwealth Agencies, Institutions of Higher Education or other Public Bodies.**

Qualifications (RFP Item 2.1)

EnergyConnect provides demand response solutions to customers across a number of geographic markets, ranging from Virginia to California, to include customers in diverse vertical markets such as educational institutions, heavy industry, commercial office buildings and retailers. The breadth and scope of EnergyConnect’s customer base demonstrates the robustness of its approach, its customer relationships, and its ability to adapt solutions to a variety of markets, applications, and operations.

EnergyConnect, Inc., a wholly-owned subsidiary of Microfield Group, Inc., a publicly traded company (MICG), works with independent system operators (ISOs), regional transmission organizations (RTOs), electric utilities and participants (clients) to economize their operations and maximize their efficiencies with regard to energy. The overall goal is to reduce consumption of energy at peak usage times. EnergyConnect enables its participants to access energy markets and proactively address their energy needs while simultaneously decreasing grid load.

EnergyConnect has been providing demand response services to customers in the PJM territory for the last two years. During that period, we have developed a portfolio of customers that provide over 500 MW of potential demand response capacity in the PJM market.

Overall, EnergyConnect provides demand response solutions in over 25 states. These include operations in all of the PJM territory, as well as the New York, New England, and California markets. In these markets, EnergyConnect’s solutions include economic, emergency, and standby reserve programs.

Cost Reduction and Allocation (RFP Item 2.1)

This section addresses cost reductions and how costs and cost reductions are allocated to the Contractor and Commonwealth Agencies, Institutions of Higher Education or other Public Bodies.

Cost Reduction (RFP Item 2.1)

The principal motivation behind demand response (DR) is to encourage large energy users to reduce or shift their electric demand during periods when aggregate electric demand and/or wholesale electricity prices are extraordinarily high. PJM, operator of the high voltage electric transmission grid in Virginia, offers several programs that pay incentives to large electricity users when they shift or curtail electric demand. PJM relies on EnergyConnect, known as a Curtailment Service Provider, (CSPs) to enroll customers; provide technical support and operating expertise; and pay customers for their participation.

Participating in a DR program allows the Commonwealth's Participating Agencies and Virginia's other electricity consumers to realize a number of important benefits including cost reductions:

- Provides a funding mechanism for facility enhancements such as continuous commissioning, building control system upgrades, energy efficiency projects, purchasing renewable energy certificates or carbon credits, as well as for general fund purposes.
- DR helps limit increases in retail electricity prices by minimizing or even avoiding the use of the most expensive power plants that are typically operated to meet electric demand on those very hot or very cold days when electric demand and wholesale prices are highest.
- DR helps keep the air cleaner by reducing the use of the dirtiest power plants.
- If customers respond in a consistent, reliable fashion, DR reduces or defers the need for new power plants and electric transmission lines, which helps control the price of electric service, preserves wilderness and national park views, and limits emissions of CO₂ and other harmful pollutants.

Allocation (RFP Item 2.1)

Revenues are allocated to each individual participant based on their reductions in energy usage. Participants who reduce energy usage in response to wholesale price increases will experience reductions in energy costs. Reductions in costs and allocated revenues are based on a simple formula comparing metered usage to the Customer Baseline (see Section 2.10.g). The difference in those numbers is then multiplied by the hourly Locational Marginal Price for the hour in which the reduction occurred. EnergyConnect's sole compensation for providing the services set forth in this proposal is a share of the amounts payable to the Participating Agencies by PJM for these load curtailments and load shifts. The Participant will then receive the larger share of revenues generated by participation.

- 2.2 The objective is to determine the optimum method of scheduling activities with high electrical demand and to reduce requirements at peak demand times for PJM. By reducing the demand at peak times PJM is saved from having to generate more electricity; electricity that is usually more costly to generate. By reducing peak demand, at set times, Commonwealth Agencies, Institutions of Higher Education and Public Bodies can receive incentives as part of the PJM demand response program to lower the overall cost of electrical power.(RFP Item 2.2)

Scheduling and Implementation

EnergyConnect's implementation process includes a systematic method to allow the Commonwealth of Virginia to receive demand response revenues at the earliest possible date. Primary tasks, and their schedules, are as follows:

1. **Data Collection** – EnergyConnect will work with each qualified participant to implement and coordinate the most cost effective data collection process.
2. **Customer Baseline** – Upon implementation of the data collection processes, EnergyConnect will begin to develop the customer baseline (CBL). Development of the CBL generally requires approximately 2 weeks of data collection, and once the CBL is developed, the Commonwealth's Authorized Users will be able to start participating in the demand response programs.
3. **Training** – EnergyConnect will conduct software training immediately upon formulation of the CBL. This will allow the Authorized Users to review their actual facilities for market participation, and upon conclusion of the training, be able to immediately participate in the PJM programs.
4. **Facilities Audit** - EnergyConnect's engineering team will perform a facilities audit of the Participating Agencies site to aid in the creation of strategic load curtailment initiatives.
5. **Leadership** - EnergyConnect guides the Participant toward opportune times to take Load Reducing actions, called "Events". These Events often occur in the summer when Real Time pricing is highest. However, heating demand and other factors create opportunity virtually year round.
6. **Support** - The Participant projects the timing (not load reduction) of Events on EnergyConnect's website, which EnergyConnect relays to PJM.
7. **Participation** - The Participant attempts to reduce load during the time projected. The actual amount of the reduction does not have to be forecast, and there is no penalty if a reduction is not achieved for any reason. Payments can be received for a reduction of as little as 100 KWH.
8. **Settlement** - EnergyConnect collects/receives Participant's meter data for the day of the Event, compares it to the Baseline, and monthly submits the Load Reduction to PJM for "settlement" – KWH Reduction x Real Time Price = Gross Revenue.
9. **Payment** - EnergyConnect receives payment from PJM, retains a fee and remits the balance to the Participant within 30 days of EnergyConnect's receipt.
10. **Relationship** - EnergyConnect receives no unconditional fee for its services – only a percentage of amounts paid by PJM.

11. **Control** - The Participant has complete control of the process, and elects when to participate or not. This differs from some utility programs requiring the utility to "dispatch" a Participant. EnergyConnect's Participants can participate whenever prices are favorable, not just when the utility dispatches them.

2.3 When, in the opinion of the Commonwealth Agencies, Institutions of Higher Education and\all Public Bodies, the quality of materials, equipment, and/or workmanship put in place by the Successful Offeror does not meet the specifications in this RFP or the contract arising from this RFP, the Successful Offeror will, at no additional cost to the Commonwealth Agencies, Institutions of Higher Education and Public Bodies immediately remove the nonconforming portion of the work and replace it with material, equipment, and/or workmanship which does meet specifications. When disputes arise concerning workmanship and/or material selected for work already accomplished, the Successful Offeror will, at no cost to the Commonwealth Agencies, Institution of Higher Education, and Public Bodies, remove, replace, and/or rework the job so that compliance with the Commonwealth's requirements are satisfied.

Guarantee (RFP Item 2.3)

EnergyConnect will guarantee the reasonable quality of materials, equipment, and/or workmanship put in place will meet or exceed the specifications in this RFP or the contract arising from this RFP at no additional cost the Authorized User. If disputes arise concerning workmanship and/or material selected for work accomplished, at no cost to the Authorized User, EnergyConnect will remove, replace and or rework the job so that compliance with requirements are satisfied.

2.4 The Commonwealth will establish a Contract Administrator to work with the Successful Offeror. The Contract Administrator will be the only authorized person that the Successful Offeror shall deal with for purposes of this contract, unless the Contract Administrator designates other personnel to assist in the administration of the contract.

Contract Administrator (RFP Item 2.4)

EnergyConnect will appoint an EnergyConnect representative to work with the Contract Administrator or duly designated assistant. EnergyConnect will support the Contract Administrator fully via phone, email, and prescheduled appointments to facilitate the greatest potential for successful state wide Demand Response participation.

2.5 The Successful Offeror will cooperate with the Commonwealth Agencies, Institutions of Higher Education and Public Bodies concerning the scheduling of work, change of work, changed location(s) due to classes,

testing, or special events, and/or the performance of additional work. The representative will be notified prior to the blocking off or closing down of any portion of buildings or grounds. The Successful Offeror shall promptly notify the Commonwealth's Contract Administrator if any change of work or any type of condition that will prevent the Successful Offeror from meeting the requirements set forth by this RFP, and any contract arising from this RFP. The representative will evaluate such information and will provide guidance to the Successful Offeror.

Cooperation (RFP Item 2.5)

EnergyConnect will cooperate with the Commonwealth Agencies concerning the scheduling of work, change of work, changed location(s) due to classes, testing, or special events, and/or the performance of additional work. EnergyConnect will notify and receive approval from the Participating Agencies' Director of Utilities prior to blocking off or closing down any portion of the Participating Agencies' buildings, grounds, or surrounding streets and alleyways. It is not currently envisioned that any such closures will be necessary for the provision of demand response services. EnergyConnect will promptly notify the Commonwealth's Contract Administrator if any change of work or any type of condition that will prevent EnergyConnect from meeting the requirements set forth by this RFP, and any contract arising from this RFP.

2.6 The Commonwealth and its Public Entities will not be responsible for losses or damages of the Successful Offeror supplies, tools, and/or equipment. Damages caused by the Successful Offeror negligence or error shall be repaired by the successful Offeror at no cost to the Commonwealth, or Public Entities. All equipment and materials used shall comply with all applicable codes and industry standards related to said equipment, materials and/or workmanship.

Losses or Damages (RFP Item 2.6)

EnergyConnect will not hold the Commonwealth and its Public Entities responsible for losses or damages of EnergyConnect's supplies, tools and/or equipment. Damages caused by EnergyConnect's negligence or error shall be repaired by EnergyConnect at no cost to the Commonwealth or Public Entities. All equipment and materials used shall comply with all applicable codes and industry standards related to said equipment, materials and/or workmanship.

2.7 The Successful Offeror will provide adequate staffing and necessary work control procedures to include, but not be limited to, planning and scheduling of work and complete work requirements within the

Commonwealth's specified time limits to assure the performance of work in accordance with the terms of this RFP.

Staffing (RFP Item 2.7)

EnergyConnect will provide adequate staffing and necessary work control procedures to include, but not be limited to planning and scheduling of work. EnergyConnect will complete work requirements within the Commonwealth's specified time limits to assure the performance of work in accordance with the terms of the RFP or the contract arising from this RFP.

2.8 The Successful Offeror shall provide all the labor, equipment, supplies and material for collecting energy consumption and demand data from the BAS or electric utility, analyzing data, and providing services on behalf of the Commonwealth Agencies, Institutions of Higher Education and Public Bodies, to participate in the PJM Load Response Program (LRP). The proposal will outline the tasks and responsibilities of the Offeror, the Commonwealth Agencies, Institutions of Higher Education and Public Bodies.

Data Collection (RFP Item 2.8)

EnergyConnect shall provide the necessary field labor to collect energy consumption data using the most efficient method possible to obtain reliable data to support PJM transaction purposes. EnergyConnect's project manager(s) will interface with the designed Commonwealth Agency, Institution of Higher Education and Public Bodies project manager(s) to coordinate any necessary on-site work to minimize disruption to the facility and its operating personnel.

Specifically, EnergyConnect will provide the following summary tasks and associated responsibilities:

- Survey facility to identify meter data collection options
- Develop costs estimates for the meter data collection options
- Recommend preferred solution to facility operations personnel
- Agree to preferred approach
- Install the desired metering technology
- Monitor the data quality
- Resolve any data quality issues as they are identified

The Commonwealth Agencies, Institutions of Higher Education and Public Bodies primary responsibility will be to:

- Provide access to the facilities for survey purposes
- Discuss and approve metering strategy
- Provide introductions to preferred BAS vendors, as needed
- Coordinate facility access for installation of metering technology

2.9 The Contractor shall meet the following general experience requirements:

General Experience (RFP Item 2.9)

a. Be a registered firm with PJM Interconnection L.L.C as a Curtailment Service Provider. (RFP Item 2.9.a)

EnergyConnect is a full member of PJM and a registered PJM Curtailment Service Provider (CSP). As a full PJM member, EnergyConnect offers participants access to all available options for selling demand response services to PJM.

EnergyConnect protects its participants' interests by attending and taking an active role in all PJM Demand Response Working Group meetings, the PJM Members Committee, the PJM Markets Committee, and MADRI (Mid-Atlantic Distributed Resource Initiative). EnergyConnect also periodically meets with PJM's senior management and intervenes in FERC proceedings when necessary. EnergyConnect recently supported changes recommended by PJM that make its demand response programs permanent.

b. Have a minimum of two (2) years experience in providing demand response services to large electricity consumers, with at least one (1) year of experience serving institutions of Higher Education. (RFP Item 2.9.b)

EnergyConnect has been providing demand response services to customers in the PJM territory for over two years. During that period, we have developed a portfolio of customers that provide more than 500 MWs of potential demand response in the PJM market, including more than one year of experience serving institutions of higher education such as Thomas Jefferson University and the University of Pennsylvania.

EnergyConnect provides demand response solutions in 25 states including fourteen states where PJM operates part or all of the high voltage transmission network, New York, New England, and California. In these markets, EnergyConnect's services include economic, emergency, and standby reserve programs.

C. Have a minimum of ten (10) clients participating in PJM Real Time and Day Ahead demand response services. (RFP Item 2.9.c)

EnergyConnect currently serves a diverse group of more than eighty (80) clients across PJM, including industrial facilities (foundries, steel melting operations, and heavy equipment manufacturers), university campuses, commercial office buildings, and mixed-use office/laboratory/manufacturing sites. Individual site loads range in size from a few hundred kilowatts to more than one hundred megawatts. EnergyConnect also serves selected customers in New York City and New England under similar load response programs sponsored by the New York ISO and ISO New England.

d. Have the ability to initiate and process, 24 hours per day, 365 days per year, day-ahead and real-time demand response transactions. (RFP Item 2.9.d)

EnergyConnect supports all PJM Demand Response Programs, including:

- Real-Time Economic Demand Response
- Day-Ahead Economic Demand Response
- Real-Time Dispatch
- Interruptible Load for Reliability (*New*)
- Synchronized Reserve Market

EnergyConnect and their clients can initiate and process day-ahead and real-time transactions at any time of the day or night, on weekdays, weekend days and holidays. For sophisticated users, EnergyConnect provides a self-service web portal through which its participants can initiate their own transactions based on current load and market price data. Alternatively, participants can authorize EnergyConnect to initiate transactions on their behalf. The self-service portal also provides estimates of demand response benefits earned by participants as soon as the day after an event.

2.10 The Contractor should provide the following services:

a. Provide timely, detailed accounting of all demand response transactions to the Commonwealth Agencies, Institutions of Higher Education or Public Bodies, Director of Utilities or appointed representative. (RFP Item 2.10.a)

EnergyConnect provides detailed accounting of all demand response transactions to authorized personnel via EnergyConnect's eServices web-based application. Both summary and detailed reports are available 24 hours per day via the Internet. Screen shots of the available reports are presented in subsequent pages of this proposal. These reports may be accessed via the internet by the appointed representatives.

Additional financial performance information will be forwarded to the Commonwealth of Virginia with each the Commonwealth of Virginia payment.

b. Design a process to generate consistent revenues without exposing Commonwealth Agencies, Institutions of Higher Education or Public Bodies to undue risk. (RFP Item 2.10.b)

EnergyConnect will develop market participation strategies with the Participating Agencies to generate revenues without exposing the Participating Agencies to undue risk through the development of client-specific participation strategies. These strategies may include participation in multiple energy markets, such as real-time and day-ahead to maximize the Participating Agencies' risk adjusted revenues.

EnergyConnect can shield the Participating Agencies from all financial risk, if so desired by the Participating Agencies.

C. Provide access to Day - Ahead and Real – Time programs. (RFP Item 2.10.c)

EnergyConnect will provide access to both day-ahead and real-time programs via its secure web-based application. The application will allow the Participating Agencies to take part in either or both programs, as desired. Further, the Participating Agencies may switch between programs on an hourly basis, as permitted by PJM program rules.

EnergyConnect will also offer access to the new PJM Real-Time Dispatch offering, which will allow participating facilities to further maximize their revenue potential.

d. Provide mechanisms that allow Commonwealth Agencies, Institutions or Higher Education or Public Bodies to initiate demand response transactions on either a full-service or self-service basis. (RFP Item 2.10.d)

The Participating Agencies may either initiate transactions on a full-service or self-service basis. Full-service can be provided by EnergyConnect to interact with PJM on the Participating Agencies' behalf, and notify the facilities of market participation opportunities. Alternatively, or additionally, the Participating Agencies may elect a self-service offering to optimize market participation through accessing EnergyConnect's eService's software to participate in the respective markets.

Under both the full and self-service offerings, EnergyConnect will be responsible for all interactions with PJM.

e. Comply with all PJM reporting rules and regulations. (RFP Item 2.10.e)

EnergyConnect's business process is fully compliant with all PJM reporting rules and regulations.

EnergyConnect has generated millions of dollars of revenues on behalf of its clients, and as such is extremely familiar with the PJM reporting rules and regulations.

EnergyConnect actively participates in the PJM Demand-Side Resources Working Group to protect the Participating Agencies' interests in DR programs, and to keep apprised of any pending rule and/or regulation changes.

f. Provide for web-based demand response transactions. (RFP Item 2.10.f)

EnergyConnect will provide web-based demand response transactions to include supporting energy market pricing information for decision making purposes, and actual transaction screens for both real-time and day-ahead market participation.

Web-based Demand Response (RFP Item 2.10.f)

Real Time Demand Response Notification

This tool is used to indicate the hours in which a participant expects to reduce load under the Real Time Demand Response option. It provides all of the information a decision-maker needs to assess whether load reductions are feasible, including forecasted temperature, Baseline Usage, forecasted load, and estimated wholesale prices. The Real Time Demand Response option requires an affirmative notification for the hours in which a participant expects to reduce load, and this is accomplished by checking boxes in the left-most column for the appropriate hours, then clicking on the "Submit" button at the bottom of the page.

EnergyConnect eServices - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Mail News RSS Feeds

Address https://tools.nrgconnect.com/ECIParticipants/BidGen/RTBidGenerator.aspx

Logout

ENERGYCONNECT

ENERGY AUTOMATION NOW

HOME BID GENERATOR LMP REPORTING FINANCIAL REPORTS (*new) PARTICIPANT LIST MANAGE USER ACCOUNT

RT Bid Generation

[Back to Facility/Date Picker](#)

Facility: [REDACTED]

Real Time Bids for Sunday, April 01, 2007

Real Time Nomination (Checked = 'Yes')	DA Award?	DA Qty (MWh)	Hour Starting (Bid Time)	Latest Load (Mar-25)	Temp (Mar-25)	CBL (Mar-25)	Temp Forecast (Apr-01)	Estimated Load	CBL Less Est. Load	DA LMP (Apr-01)	RT LMP (Mar-31)
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 00:00 EDT	40703*		41544		40703*	841*	38.66	24.39
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 01:00 EDT	40481*		41233		40481*	752*	37.69	24.54
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 02:00 EDT	40051*	44	40811	41	40051*	760*	36.78	23.19
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 03:00 EDT	39759*		40370		39759*	611*	36.41	21.81
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 04:00 EDT	39553*		40064		39553*	511*	35.86	25.62
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 05:00 EDT	39578*	43	39948	41	39578*	370*	36.66	51.58
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 06:00 EDT	39347*		39708		39347*	361*	37.79	26.20
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 07:00 EDT	38281*		39306		38281*	1025*	50.50	80.31
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 08:00 EDT	38885*	43	39880	44	38885*	995*	61.90	118.04
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 09:00 EDT	39512*		40692		39512*	1180*	61.43	94.76
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 10:00 EDT	40348*		41426		40348*	1078*	62.40	79.01
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 11:00 EDT	40790*	49	41920	50	40790*	1130*	62.56	71.65
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 12:00 EDT	40970*		42216		40970*	1246*	59.39	49.75
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 13:00 EDT	42995*		42417		42995*	-578*	58.71	108.59
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 14:00 EDT	41968*	53	42397	53	41968*	429*	56.63	54.93
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 15:00 EDT	42354*		42332		42354*	-22*	50.37	61.07
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 16:00 EDT	43174*		42284		43174*	-890*	51.80	68.68
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 17:00 EDT	42162*	53	42021	53	42162*	-141*	49.10	36.65
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 18:00 EDT	43274*		41961		43274*	-1313*	50.09	50.43
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 19:00 EDT	45145*		41892		45145*	-3253*	79.42	108.41
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 20:00 EDT	44893*	49	41461	51	44893*	-3432*	94.27	54.60
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 21:00 EDT	42526*		40890		42526*	-1636*	67.42	105.59
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 22:00 EDT	40401*		40441		40401*	40*	49.04	74.10
<input checked="" type="checkbox"/>	<input type="checkbox"/>		04/01/2007 23:00 EDT	39908*	45	39859	50	39908*	-49*	45.93	42.79

☐ Register Hours Currently Selected as NEW Daily Bid Plan

*=Meter load with previous curtailment action

Submit

Day Ahead Demand Response Notification (RFP Item 2.10.f)

The day ahead demand response participation software tool supports all aspects of the Day Ahead Demand Response option. A mirror image of the Real Time tool, with some minor modifications, this screen is used to indicate the hours, mw amount, and price at which the participant offers to reduce load. It provides all of the information a decision-maker needs to assess whether load reductions are feasible, including forecasted temperature, Baseline Usage, forecasted load, and estimated wholesale prices. The Day Ahead Demand Response option's notification of the hours, mw amount, and price, is accomplished by entering the appropriate values, both price and mw amount, in the two left-most columns for the applicable hours. Then, as in the Real Time screen, the participant will click on the "Submit" button at the bottom of the page. After the bidding process closes, the participant is notified of the quantity and prices awarded, as shown in the third and fourth columns of the screen below.

EnergyConnect eServices - Windows Internet Explorer
https://tools.nrgconnect.com/ECIParticipants/BidGen/DABidGenerator.aspx
Google
SnagIt
EnergyConnect eServices

Logout
ENERGYCONNECT
HOME
BID GENERATOR
LMP REPORTING
FINANCIAL REPORTS (*new)
MANAGE USER ACCOUNT
ENERGY AUTOMATION NOW

DA Bid Generation

[Back to Facility/Date Picker](#)

Facility:
Day Ahead Bids for Wednesday, April 25, 2007

Quantity (MWh)	Bid Price	Quantity Awarded (MWh)	Price Awarded	Hour Starting (Bid Time)	Latest Load (Apr-11)	Temp (Apr-11)	CBL (Apr-13)	Temp Forecast (Apr-25)	Estimated Load	CBL Less Est. Load	DA LMP (Apr-25)	RT LMP (Apr-23)
<input type="text"/>	<input type="text"/>			04/25/2007 00:00 EDT	9740*		17251		9740*	7511*	27.40	22.59
<input type="text"/>	<input type="text"/>			04/25/2007 01:00 EDT	9633*		17049		9633*	7416*	24.02	23.01
<input type="text"/>	<input type="text"/>			04/25/2007 02:00 EDT	9573*	39	17063	54	9573*	7490*	23.44	17.20
<input type="text"/>	<input type="text"/>			04/25/2007 03:00 EDT	9519*		16988		9519*	7469*	23.10	9.37
<input type="text"/>	<input type="text"/>			04/25/2007 04:00 EDT	9536*		17076		9536*	7540*	23.89	19.70
<input type="text"/>	<input type="text"/>			04/25/2007 05:00 EDT	9850*	38	17383	51	9850*	7533*	29.55	18.20
<input type="text"/>	<input type="text"/>			04/25/2007 06:00 EDT	10342*		17766		10342*	7424*	54.60	50.93
<input type="text"/>	<input type="text"/>			04/25/2007 07:00 EDT	11076*		18340		11076*	7264*	62.58	57.28
<input type="text"/>	<input type="text"/>			04/25/2007 08:00 EDT	11732*	40	19204	52	11732*	7472*	65.01	87.14
<input type="text"/>	<input type="text"/>			04/25/2007 09:00 EDT	12228*		19896		12228*	7668*	69.40	88.21
<input type="text"/>	<input type="text"/>			04/25/2007 10:00 EDT	12358*		20254		12358*	7896*	72.71	93.15
<input type="text"/>	<input type="text"/>			04/25/2007 11:00 EDT	12753*	48	20462	61	12753*	7709*	72.66	84.17
<input type="text"/>	<input type="text"/>			04/25/2007 12:00 EDT	13274*		20532		13274*	7258*	71.15	67.82
<input type="text"/>	<input type="text"/>			04/25/2007 13:00 EDT	13417*		20574		13417*	7157*	73.50	96.41
<input type="text"/>	<input type="text"/>			04/25/2007 14:00 EDT	13335*	52	20425	65	13335*	7090*	72.87	101.45
<input type="text"/>	<input type="text"/>			04/25/2007 15:00 EDT	13232*		20191		13232*	6959*	72.90	99.83
<input type="text"/>	<input type="text"/>			04/25/2007 16:00 EDT	12971*		19993		12971*	7022*	72.31	107.59
<input type="text"/>	<input type="text"/>			04/25/2007 17:00 EDT	12345*	53	19625	65	12345*	7280*	69.51	81.12
<input type="text"/>	<input type="text"/>			04/25/2007 18:00 EDT	11990*		19248		11990*	7258*	60.95	53.29
<input type="text"/>	<input type="text"/>			04/25/2007 19:00 EDT	11434*		18787		11434*	7353*	75.67	40.93
<input type="text"/>	<input type="text"/>			04/25/2007 20:00 EDT	10953*	49	18131	59	10953*	7178*	83.89	145.44
<input type="text"/>	<input type="text"/>			04/25/2007 21:00 EDT	10716*		17845		10716*	7129*	68.27	112.66
<input type="text"/>	<input type="text"/>			04/25/2007 22:00 EDT	10532*		17503		10532*	6971*	47.65	37.28
<input type="text"/>	<input type="text"/>			04/25/2007 23:00 EDT	10371*	46	17071	53	10371*	6700*	36.34	26.58

☐ Apply Daily Bid Plan
☐ Register Hours Currently Selected as NEW Daily Bid Plan

Bid Price (Applies to ALL Hours)

☒ Auto Create RT Bids for Non DA Awards?

*Meter load with previous curtailment action

- g. Furnish information tools (hardware, software or both) that allow Commonwealth Agencies, Institutions of Higher Education and Public Bodies to assess its demand response performance each day and make appropriate tactical adjustments. All work will meet the standards specified in this, and all applicable local, state and federal standards. (RFP Item 2.10.g)

EnergyConnect will provide the necessary information tools to allow the Commonwealth of Virginia to access its demand response performance each day. These tools include both web-based financial revenue and physical baseline use reconciliation tools.

Revenue Reporting

This report displays all of the details behind a single day's revenue calculation. To view this report, a user has to click on "Financial Reports" (see grey title bar above), and then select the particular day of interest from a summary page that shows daily totals. Participants can assess their performance and quickly determine which strategies produce results and which do not.

EnergyConnect eServices - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Address: https://tools.nrgconnect.com/ECIParticipants/Reports/ActivityRevenueReportViewer.aspx

ENERGYCONNECT *ENERGY AUTOMATION NOW*

Logout HOME BID GENERATOR LMP REPORTING FINANCIAL REPORTS (*new) PARTICIPANT LIST MANAGE USER A

RT Revenue Detail Report
[Back to Summary](#)

1 of 1 100% Find Next Select a format Export

RTN Revenue Detail Report

Facility Name: [REDACTED]
 Facility ID: [REDACTED]
 EDC Acct Num: [REDACTED]
 Target Date: 03/02/2007
 Status / PJM: Filed ECI Estimate With ISO
 Initial Estimate: \$13,301.40 (est)
 ISO Revenue: (not yet reconciled)

(Date/Time Report Processed - 4/2/2007 12:46 PM EDT)

Date	Hour Ending	CBL (KWh)	Actual Meter Load (KWh)	Load Reduction (KWh)	Load Reduction Gross (KWh)	Retail Rate (\$/MWh)	RT LMP (\$/MWh)	RT Qty (KWh)	RT Estimate
2007-Mar-02, Fri	1	65581	40254	25327	26294	\$19.20	\$23.97	26294	\$125.42
2007-Mar-02, Fri	2	64427	39743	24684	25626	\$19.20	\$23.75	25626	\$116.60
2007-Mar-02, Fri	3	63889	39398	24491	25426	\$19.20	\$23.46	25426	\$108.31
2007-Mar-02, Fri	4	63599	39143	24456	25390	\$19.20	\$23.43	25390	\$107.40
2007-Mar-02, Fri	5	63680	40661	23019	23898	\$19.20	\$23.46	23898	\$101.81
2007-Mar-02, Fri	6	64737	42030	22707	23574	\$19.20	\$24.06	23574	\$114.57
2007-Mar-02, Fri	7	65728	42728	23000	23878	\$19.20	\$26.04	23878	\$879.67
2007-Mar-02, Fri	8	65944	44310	21634	22460	\$19.20	\$21.83	22460	\$957.47
2007-Mar-02, Fri	9	63436	46847	17589	18260	\$23.50	\$22.12	18260	\$1,682.11
2007-Mar-02, Fri	10	64178	47970	16208	16827	\$23.50	\$25.37	16827	\$704.55
2007-Mar-02, Fri	11	64501	49137	15364	15950	\$23.50	\$29.16	15950	\$1,422.10
2007-Mar-02, Fri	12	64456	49510	14946	15516	\$23.50	\$46.01	15516	\$349.27
2007-Mar-02, Fri	13	64358	51177	13181	13684	\$23.50	\$37.38	13684	\$189.93
2007-Mar-02, Fri	14	64440	51000	13440	13953	\$23.50	\$55.78	13953	\$450.40
2007-Mar-02, Fri	15	64387	50177	14210	14752	\$23.50	\$43.44	14752	\$294.15
2007-Mar-02, Fri	16	64147	47315	16832	17474	\$23.50	\$25.05	17474	\$27.08
2007-Mar-02, Fri	17	65734	46566	19168	19900	\$19.20	\$25.80	19900	\$131.34
2007-Mar-02, Fri	18	65680	43965	21715	22544	\$19.20	\$25.16	22544	\$134.36
2007-Mar-02, Fri	19	64822	43125	21697	22525	\$19.20	\$21.16	22525	\$945.15
2007-Mar-02, Fri	20	63694	42182	21512	22333	\$19.20	\$26.80	22333	\$1,063.05
2007-Mar-02, Fri	21	65113	41220	23893	24605	\$19.20	\$25.29	24605	\$1,143.26

This tool displays all of the detailed calculations behind the derivation of Baseline Use for a particular day. The web page from which this example is taken is much wider than a typical printed page so it has been purposely truncated to show only hours one through seven.

Page 16
THIS PAGE CONTAINS PROPRIETARY INFORMATION OF ENERGYCONNECT, INC.

This tool displays wholesale prices in the various market areas within PJM. The example below is for the market area that comprises DVP's service territory for the period from March 1 through March 31. Hourly values are color-coded so that it's easy to identify periods when wholesale prices are likely to be high. In this example, yellow cells indicate prices between 7.5 and 12.5 cents per kWh, gold cells indicate prices between 12.5 and 15 cents per kWh, and red cells indicate prices higher than 15 cents per kWh. This report can be generated for any period from July 1, 2005 to the present.

EnergyConnect eServices - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address https://tools.nrgconnect.com/ECIParticipants/Reports/DAHourlyLMP.aspx

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ENERGY AUTOMATION NOW

HOME | BID GENERATOR | LMP REPORTING | FINANCIAL REPORTS (*new) | PARTICIPANT LIST | MANAGE USER ACCOUNT

> DA Hourly LMP | RT Hourly LMP | 5-Min LMP

DA Hourly LMP

LMP: From: To:

1 of 1 100% Find | Next Select a format Export

DOM

Day Ahead Hourly Price Grid
(March 1, 2007 to March 31, 2007)

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1-Mar-07 Thu	41.52	40.41	40.15	38.44	43.81	58.94	104.36	97.13	80.53	74.61	69.19	59.88	54.87	50.53	45.55	42.82	42.73	50.42	85.05	78.97	76.90	61.01	38.27	31.79
2-Mar-07 Fri	26.65	25.62	24.61	24.62	25.66	29.03	45.54	54.34	53.90	56.14	55.67	51.77	45.40	44.52	40.88	39.52	40.75	41.61	70.93	68.88	65.92	57.26	48.06	35.93
3-Mar-07 Sat	46.45	43.65	39.79	38.79	38.60	44.71	49.11	61.08	70.44	68.99	68.62	59.91	52.13	46.03	41.65	40.60	43.76	49.92	85.07	79.49	71.90	70.84	58.34	51.05
4-Mar-07 Sun	42.94	38.03	37.09	37.97	39.15	44.26	58.78	65.11	78.27	80.95	82.43	66.02	60.43	53.85	50.15	48.29	52.15	66.02	96.27	95.31	87.75	77.92	69.71	57.60
5-Mar-07 Mon	55.73	51.00	50.80	53.91	59.38	69.04	101.41	110.97	89.42	82.28	78.32	67.60	64.44	59.61	53.05	47.30	49.95	67.59	96.51	98.50	85.50	73.32	62.61	60.71
6-Mar-07 Tue	98.35	93.07	94.99	98.76	107.79	125.90	169.59	172.46	138.55	127.81	125.59	109.83	96.87	87.69	80.28	75.65	81.36	106.49	159.10	158.23	142.86	119.55	101.64	94.05
7-Mar-07 Wed	91.68	85.81	84.17	90.62	100.44	117.92	148.07	150.25	116.39	105.97	108.08	90.43	79.19	75.60	67.87	65.01	69.41	91.02	120.65	112.78	110.64	93.97	71.88	72.52
8-Mar-07 Thu	66.35	66.15	67.37	71.80	73.49	82.24	122.41	117.24	91.78	81.03	77.94	70.58	64.69	61.15	59.04	54.06	55.17	64.55	105.02	104.22	93.98	80.00	68.54	61.63
9-Mar-07 Fri	66.11	65.99	67.50	70.48	71.72	83.87	129.89	112.59	85.38	77.47	73.52	68.30	60.60	56.77	51.97	47.26	49.14	58.78	75.15	70.84	68.70	66.53	61.43	60.12
10-Mar-07 Sat																								
11-Mar-07 Sun	38.25	37.10	0.00	37.53	36.67	38.42	39.20	51.96	49.94	60.48	68.68	59.93	52.40	50.60	46.94	44.49	45.67	56.27	55.64	83.01	80.32	74.21	70.30	39.90
12-Mar-07 Mon	39.92	39.50	43.78	42.91	47.51	56.56	87.60	106.17	81.73	70.13	66.64	63.95	58.81	53.48	50.11	49.18	47.73	50.77	61.06	72.18	67.68	64.72	51.79	48.68
13-Mar-07 Tue	41.28	39.40	38.96	39.47	42.80	49.45	69.19	79.85	64.14	60.99	61.25	58.95	54.82	52.69	48.43	45.96	46.62	47.89	52.33	69.43	66.77	61.85	47.92	37.37
14-Mar-07 Wed	35.93	32.66	30.35	29.80	33.27	43.48	59.37	60.11	62.44	64.08	62.38	64.42	63.65	63.83	59.49	57.79	55.59	53.73	60.42	84.81	85.98	60.95	48.55	42.13
15-Mar-07 Thu	35.35	30.93	29.65	25.60	28.59	38.22	51.77	62.89	65.61	65.16	67.55	66.45	66.03	65.85	63.05	61.13	57.26	56.08	52.18	73.81	71.79	62.19	53.76	43.58
16-Mar-07 Fri	38.30	35.89	35.01	34.09	35.47	47.92	76.74	81.63	81.64	82.58	82.70	82.75	80.30	78.37	76.61	72.08	71.63	68.58	79.84	83.37	81.36	76.83	66.09	60.16
17-Mar-07 Sat	69.22	66.30	64.56	64.46	66.46	71.59	75.21	80.64	90.00	94.02	93.40	82.67	75.67	68.02	63.11	61.48	62.05	66.28	76.06	95.74	91.95	81.94	75.13	70.22
18-Mar-07 Sun	83.23	85.44	80.96	82.57	88.28	94.34	78.95	83.29	86.50	84.29	84.20	74.10	63.05	61.51	58.16	56.41	58.39	63.08	78.79	92.75	86.85	76.68	67.14	69.87
19-Mar-07 Mon	66.36	64.89	64.06	62.80	70.44	74.84	102.59	100.14	95.18	85.89	82.84	77.79	73.78	64.47	57.86	56.40	56.24	58.78	77.85	93.70	86.84	66.84	56.22	47.77
20-Mar-07 Tue	39.89	40.19	40.55	40.23	40.45	43.50	74.14	76.83	71.25	69.93	69.64	62.97	60.73	57.06	51.89	51.27	52.20	53.74	61.78	80.40	87.91	70.00	58.36	44.26
21-Mar-07 Wed	43.36	40.58	39.96	42.08	44.31	53.46	86.79	93.14	78.07	73.21	71.20	66.15	61.59	57.47	53.27	51.94	52.67	54.34	64.74	81.21	76.45	61.63	53.54	42.40
22-Mar-07 Thu	37.76	36.57	36.36	36.76	38.41	38.07	64.00	67.79	65.56	64.55	64.75	61.77	51.32	51.02	44.08	43.77	43.75	40.09	49.45	63.44	61.45	55.36	43.67	36.43

h. Maintain constant dialog with the appointed, at each Commonwealth Agency, Institution of Higher Education or Public Body participating in the program, representative that assures the success of the program. (RFP Item 2.10.h)

EnergyConnect will schedule periodic review participation sessions with the Participating Agencies' Director of Utilities to review program participation, in addition to being available with the Director, and participants, via the phone and/or e-mail to discuss participation strategies and tactics.

It is envisioned that, at a minimum, quarterly meetings will be held with DMME to review status and action plans. We also anticipate scheduling user-group meetings with participating agencies to foster an exchange of ideas and cultivate new load reduction strategies.

EnergyConnect's account management organization will be actively engaged with the Commonwealth, as we are directly motivated, by the revenue sharing structure, to maximize the Commonwealth of Virginia program revenues.

i. Provide immediate communication and reconciliation of any issues of concern. (RFP Item 2.10.i)

EnergyConnect will notify the appropriate the Commonwealth of Virginia personnel of any issues and/or concerns related to market participation and load shifting/reduction strategies. Further, EnergyConnect will work with the Commonwealth of Virginia towards the timely resolution of any issues.

j. Provide all labor, supervision, travel, materials, tools, vehicles, software and equipment, including hardware with associated software, necessary to provide data evaluation services and periodic reports. (RFP Item 2.10.j)

EnergyConnect will provide all labor, supervision, travel, materials, tools, vehicles, software and equipment, including hardware and associated software, necessary to provide data evaluation service and periodic reports to support the Participating Agencies' PJM market participation. It is understood that select Commonwealth Participating Agency's may already be collecting the necessary data via its Energy Management system, and will be able forward this data to EnergyConnect in a mutually acceptable format.

k. Ensure that work performed is completed so as to not adversely affect daily operations at Commonwealth Agencies, Institutions of Higher Education or Public Bodies facility utilities remain in working order at all times, unless otherwise approved by the facility representative. (RFP Item 2.10.k)

All program related work will be coordinated with the Participating Agencies' Director of Utilities and/or facilities personnel. EnergyConnect will not be directly affecting the Participating Agencies' operations, without such approval and coordination.

2.11 Notify, and receive approval from the appropriate Director of Utilities prior to blocking off or closing down any portion of buildings, grounds, or surrounding streets or alleyways. (RFP Item 2.11)

EnergyConnect will notify and receive approval from the Participating Agencies' Director of Utilities prior to blocking off or closing down any portion of the Participating Agencies' buildings, grounds, or surrounding streets and alleyways. It is not currently envisioned that any such closures will be necessary for the provision of demand response services.

2.12 Provide payment processing services for all savings from demand response transactions. Ensure payment of agreed upon % of savings within 30 days of the first of the month directly after the date of the transaction. Example: transaction March 15th. Check should be received no later than 30 days from April 1st (April 30th). (RFP Item 2.12)

EnergyConnect will provide payment processing services for the Commonwealth of Virginia for all demand response transactions from PJM to ensure timely payments to the Commonwealth of Virginia according to the agreed upon % savings. The payment processing services will include appropriate detailed transaction accounting.

Payment will be made within 30 days of the first of the month directly after the date of the physical or financial PJM transaction.

EnergyConnect will typically provide an estimate of amounts the Commonwealth of Virginia's Authorized Users earn from demand response activities within two business days of receipt of meter data from the Participating Agencies or Dominion Virginia Power. These amounts must be verified by both PJM and Dominion Virginia Power. Section 3.10.7 contains an example of the self-service portal's display of this information.

2.13 Service Interruption and Security (RFP Item 2.13)

- a. Data collection shall not interfere with the operation of the Building Automation System (BAS) or the ongoing collection of BAS data for other purposes.**

EnergyConnect's data collection process does not interfere with the on-going operation of the BAS nor ongoing data collection efforts. Where an interface is desired to the BAS for data collection or supervisory control purposes, the solution will be engineered with the BAS service company. In most cases, the meter data will be obtained directly from the utility meter or shadow meters, where the utility meter data is not readily accessible.

- b. Data collection devices shall be protected so that power interruption will not cause data loss.**

EnergyConnect's standard data collection device has on-board data storage to specifically prevent data loss in case of power interruption. This device has been deployed through Europe and the US for specific data collection purposes.

- c. Security protocols or hardware shall be provided to prevent hacking into the BAS from data collection devices or interconnections.**

EnergyConnect's standard data collection device does not interface to the BAS, but rather it interfaces to the utility meter, so a physical connection to the BAS is not established to prevent hacking. Where it is desired, by the Agency, to interface to the BAS, an engineered solution will be developed, and presented to the Agency for approval prior to implementation.

- d. Failure of any data collection device shall not interfere or cause failure or shutdown of the BAS or connected systems.**

As previously discussed, EnergyConnect's standard data collection device is not interfaced to the BAS, and therefore can't interfere with, or cause failure or shutdown of the BAS. If the Agency desires that EnergyConnect interface with the BAS, an engineered solution will be developed and approved prior to implementation.

2.14 Provide a description of how cogeneration and Black Start opportunities will be handled. (RFP Item 2.14)

Cogeneration and black start generation opportunities, by their very nature, will be custom designed and engineered by EnergyConnect and the appropriate Agency personnel, and their consultants/vendors. EnergyConnect's business model is to partner with existing trusted suppliers who know, and understand, individual equipment operations. The general philosophy is to interface to the cogeneration or other distributed generation switchgear/control systems to leverage the logic of the existing

switchgear/control systems by providing a relatively straightforward start/stop/output request to the switchgear/control system. As desired by the individual Agency, EnergyConnect will also serve to project manage the implementation. If control system upgrades are required, EnergyConnect and the Agency will review the requirements, and strive to arrive at a mutually agreeable financial means to support the requirements.

2.15 Install any needed monitoring equipment at no direct cost to the Commonwealth. (RFP Item 2.15)

EnergyConnect will install any needed monitoring equipment at no direct cost to the Commonwealth. All necessary data collection and communication equipment will be provided to the Commonwealth by EnergyConnect, and funded out DR revenues. On a case-by-case basis, EnergyConnect may also advance funding to install the necessary equipment to generate demand response revenues.

3 PRE-PROPOSAL CONFERENCE:

No response required.

4 PRICING SCHEDULE:

The Demand Response Services Program is intended to offer an economic incentive to achieve electric demand reduction; the proposal shall address cost reduction potential to the Commonwealth of Virginia and how costs and cost reduction are allocated to the Contractor, the Commonwealth of Virginia and its Public Entities. It is expected that there will not be any set up costs associated with the Demand Response Services Program. The percentages allocated to savings and fee/commission as well as any other aspect of the price of the services shall remain constant during the contract period and percentages shall remain constant during all renewal periods. Provide the total cost (percentage of savings) for the proposed services that are described in Specific Proposal Requirements on Page 10, Section VI, Item B.6 and B.7. The percentages submitted will be used to determine the price score for the RFP evaluation process.

Demand Response Services: __%Commonwealth of Virginia Savings + __% Vendor fee/commission = 100% Total Savings.

Cost Reduction Potential (RFP Item 4)

The Commonwealth spent approximately \$100 million on electricity for the 12 month period ending June 2005, based upon information provided to EnergyConnect by the Commonwealth. The summary statistics for the accounts are as follows:

Peak kW Range	Qty. of Accts.	Total KW	Annual Electricity Spend (millions)	Cumulative % Of Electric Spend
1,000 +	77	254,866	\$56	56%
500-999	91	65,059	14	70%
200-499	163	50,561	11	82%
1-199	5,139	n/a	17	100%
Total	5,470		\$98	

It is interesting to note that approximately 56% of the Commonwealth's electricity spend is concentrated in 77 accounts; all with peak loads over 1,000 kW. Further, it is interesting to note that 80% of the spend is concentrated in accounts with peak loads over 200 kW, comprising 331 total accounts.

Based upon our experience in similar PJM markets, EnergyConnect estimates that the demand reduction potential for the Commonwealth's accounts is between \$4.0 and \$7.5 million per year, based upon the 2006 data. This assumes moderate demand response participation by the Commonwealth.

Pricing (RFP Item 4)

EnergyConnect is pleased to offer demand response services to the Commonwealth purely on a performance basis with no set up costs for the Commonwealth. The demand response products are to include real-time notification, day-ahead and real-time dispatch.

The revenue split will be as follows:

- Commonwealth – 85%
- EnergyConnect – 15%

EnergyConnect will also ***advance qualified participating agencies up to \$10,000*** for facility upgrades and/or data collection devices that facilitate demand response revenue, in order to accelerate the Commonwealth's participation in the demand response markets. The advance, along with other metering, BAS or generation control costs, will be reimbursed from the participating agencies' share of the revenues.

EnergyConnect's minimum commission is \$100 per month for each active demand response account.

5 *Additional Considerations*

No response required.

6 *Commonwealth Contracting Requirements*

No response required.

7 *PROPOSED TIMEFRAME*

No response required.

8. *PROPOSAL PREPARATION AND SUBMISSION REQUIREMENTS*

No response required.

8 SPECIFIC REQUIREMENTS OF PROPOSAL: (RFP Item 8)

1. Return of the RFP cover sheet and all addenda acknowledgments, if any, signed and filled out as required. (See Page 1)
2. Offeror Data Sheet, including as an attachment to the RFP, and other specific items or data requested in the RFP. (See Attachment A)
3. A written narrative statement to include:

1) Experience of your company and its staff in providing the services described in the Statement of Needs (Section 2.);

Experience and References (RFP Item 8.3.1)

Since its founding, EnergyConnect has demonstrated the ability to sign customers, provide the required infrastructure to enable customers to participate, and to manage the customers so that they remain focused on DR programs.

Reference customers have been chosen based on similar characteristics to the Commonwealth of Virginia's Authorized Users. Additional reference customers are available upon request.

Thomas Jefferson University

Thomas Jefferson University (TJU) is an academic health center located in downtown Philadelphia, Pennsylvania. TJU is composed of Jefferson Medical College, Thomas Jefferson University Hospital, the College of Graduate Studies, and the College of Allied Health Sciences. Today, this academic health center tests and treats 25,000 inpatients and more than 300,000 outpatients every year, and enrolls 2,600 future health care professionals. TJU's facilities are spread over a 13-acre campus.

Thomas Jefferson University's facilities management group has centralized responsibility for facilities management and energy aware operations. EnergyConnect started providing demand response solutions for the university in 2006. TJU began with participation in the economic real time program. Since gaining comfort and operational expertise in that market, TJU has also become active in the economic day ahead program.

The contact name is Randy Haines and his phone number is 215-503-6099

University of Pennsylvania

The University of Pennsylvania (Penn) is private university located in downtown Philadelphia. Penn is home to over 23,000 undergraduate and graduate students as well as over 13,000 faculty and staff. Penn's West Philadelphia campus consists of 155 buildings (excluding the hospital) spread over 269 acres.

Penn's facilities management group has centralized responsibility for the operations of the campus. EnergyConnect started providing demand response solutions to the university in 2006. Like TJU, Penn began with participation in the economic real time program eventually expanding to the economic day ahead program. In addition, Penn is actively involved in the standby reserve program.

The contact name is Gerry McGillian and his phone number is 215-543-4430

Drexel University

Drexel University is a private university located in Philadelphia. Its focus is on the sciences and engineering and has a number of graduate programs including a medical school. The student population is over 6,000 including graduate schools. The campus consists of over forty buildings.

The contact name is Hans Greene and his phone number is 215-895-1921.

Hahnemann University Hospital

Hahnemann University Hospital is a large multi-disciplinary teaching hospital located in inner city Philadelphia and is affiliated with Drexel University College of Medicine and the Tenet Health System.

The contact name is Phil Van Cleave and his phone number is 215-762-3519.

Brooklyn Army Terminal

The Brooklyn Army Terminal is located in Brooklyn, New York and is owned and operated by the New York City Economic Development Corporation. It consists of two very large buildings that were built in the early 1900's. The total square footage of the two buildings is over six million square feet. There are over two hundred tenants in the buildings with activities from general office to storage to manufacturing.

The contact name is Mayra Ortiz and her phone number is 212-312-3636.

2) Names, qualifications and experience of personnel to be assigned to the project;

Personnel Qualifications (RFP Item 8.3.2)

EnergyConnect, Inc. brings together a management team with decades-long backgrounds in the electric power, facility automation, and building and industrial controls industries who are recognized experts in their fields. EnergyConnect's executive management is backed by an experienced, highly qualified support staff that consistently delivers comprehensive, industry-leading demand response solution. Key executives and account team members include:

Rod Boucher: CEO of Microfield Group, Inc.

Rod is a co-founder of EnergyConnect, Inc. and CEO of Microfield Group, Inc. (the parent company to EnergyConnect, Inc.). Rod has an extensive background in the electric supply and delivery industry, having served as a senior officer of major utility, power marketing, and independent power companies including PacifiCorp, Citizens, and Calpine. His extensive experience in production, operations, mergers & acquisitions, information services, telecommunications, engineering, marketing, trading, finance and risk management provides perspectives that few in the industry possess.

Gene Ameduri: President of EnergyConnect

Gene, a co-founder of EnergyConnect, Inc. and President of EnergyConnect, Inc., has over twenty-five years of experience in the energy management and building automation business. Gene has been responsible for implementing marketing, sales and construction/coordination strategies for the design and development of computerized building control systems on both a local and national scale in the office building, shopping center, retail, educational and telecommunications industries. He has developed integrated demand side management programs for multiple facilities, as well as energy asset management and asset ownership projects including scope development, economic analysis, costing, measurement and verification, funding acquisition and project design, management and commissioning.

John Stremel: Senior Vice President of Technology at EnergyConnect

John oversees the design and implementation of load curtailment program software and hardware support services as the chief technology office of EnergyConnect. John's responsibilities cover the whole range of functions, including programming for bidding, baseline load calculations, price monitoring, notifications, scheduling and settlement processes. John also serves as the agent on behalf of our participants if they desire to implement pre-arranged strategies through EnergyConnect in the demand response markets. John has been a trusted steward to participants in his more than two years at EnergyConnect, and continues to assist participants implement winning strategies in the increasingly important demand response markets. Previously, John led the software development for one of the major privately-owned power exchanges that served several of the most active trading markets in the U.S.

Steve Schaefer: Senior Vice President of Sales & Marketing at EnergyConnect

Steve is an energy industry veteran with over 25 years of experience in the power industry. Steve's focus is on developing the sales and partnership channels for EnergyConnect's Energy Automation solutions, as well as maximizing participant's ability to generate revenue. Prior to joining EnergyConnect, Steve was instrumental in leading several energy-related startup organizations into acquisitions and mergers. In addition, Steve's background includes business development, strategic partnerships, and alliance management for various energy services and software companies.

Jack Ellis: Vice President of Strategy at EnergyConnect

Jack is an energy industry veteran with more than 30 years of power industry experience. Jack's focus is on the state of the energy industry, particularly how EnergyConnect's systems and services can solve the needs of the energy community. Prior to joining EnergyConnect, Jack was co-founder and executive vice president of Automated Power Exchange (APX), a leading provider of information, analytics and back-office services to the energy and environmental markets. Earlier in his career, Jack acted as advisor to utilities, regulators, private firms and research organizations, with a focus on evaluating new generating technologies, assessing the operational benefits of strong transmission interconnections and utility mergers, and preparing regulatory filings.

George Barnes: Director of Business Development for the Mid-Atlantic at EnergyConnect

George Barnes (gbarnes@energyconnectinc.com) will provide local leadership and direct contact. George has been in energy commodities for over 14 years. He possesses a comprehensive knowledge of energy products and extensive background with PJM and PJM programs. His most recent job function was President and Founder of Innovative Energy Consulting, leading an energy software marketing team and provided consulting services for commodities trading firms.

Jim Clark: Director of Engineering at EnergyConnect

Jim and his staff of engineers is responsible for helping customers identify and evaluate demand response strategies for participating facilities. Jim gains special satisfaction in tailoring solutions to maximize revenue for participating customer. Prior to joining EnergyConnect, Jim served customers and energy companies as an independent consultant, advising them on energy services solutions, performance contracting, and cogeneration feasibility. Jim is a past

President and current board member of the Greater Philadelphia Association of Energy Engineers and is a Certified Energy Manager.

3) Resumes of staff to be assigned to the project;

Resumes for John Stremel and Jim Clark are contained in the following pages of this proposal. John Stremel heads up the PJM settlement and payment team. Jim Clark leads the metering and load reduction strategy team who will be working with participant facilities.

PROFESSIONAL EXPERIENCE

EnergyConnect, Inc.

August 2005 – Present

Senior Vice President: Responsible for developing demand response support services in the deregulated electricity markets for PJM, NY, NE, CA, TX. Lead the designed and implementation of energy curtailment technical services, settlements, business office, information technology and data management functions for ECI.

Stremel Associates

February 2005 – August 2005

Principal: Projects included: Building a scheduling system for EnergyConnect and directing a software team at CenterLogic; developing a logbook standard for power plants in California in response to CPUC regulations; consulting to Automated Power Exchange on Federal Energy Regulatory Commission resettlement of power markets.

Automated Power Exchange, Inc. (APX)

July 1997 – February 2005

Vice President, Software Development: Designed and led the development team for a software based trading system for energy markets in California, Texas, and the UK.

Designed a software system as the backbone for services marketed to Scheduling Coordinators in California and Texas.

Designed a software system and led the implementation team for wind generators to participate in the CAISO markets.

Designed a software system and led the implementation team for transmission owners to schedule capacity in the California transmission markets for the California-Oregon Transmission Corridor.

Designed a software system for green generation to offer their energy in a certified green market.

Decision Focus Inc.

September 1983 – July 1997

Senior Associate: Designed a trading system for evaluating costs and benefits of transactions in deregulated markets for large trading entities.

Developed (registered trademark) an hourly chronological software system for simulating utility operations and production costs.

Tennessee Valley Authority

July 1975 – August 1983

Manager: Designed the software and decision support system for evaluating the costs and risks of TVA's nuclear construction schedule.

EDUCATION

Carnegie Mellon University

1975

Masters of Science: Industrial Administration

California State University (San Diego, CA)

1972

Bachelor of Arts: Economics and Statistics

PUBLICATIONS

"The Cumulate Method of Calculating Loss of Load Probability", IEEE Power Apparatus and Systems, 1979, coauthored with Narayan Rau of the National Energy Board of Canada.

"Maintenance Scheduling Methods for Planning Models", Ohio State Conference on Production Costing, 1981, coauthored with R. Taber Jenkins of the Tennessee Valley Authority.

"New Concerns and New Methods for Generation Expansion Planning in the Electric Utility Industry", Energy Modeling III: Dealing with Energy Uncertainty, Institute of Gas Technology, 1980.

"Production Costing Using the Cumulant Method of Representing the Equivalent Load Curve", IEEE Power Apparatus and Systems, Volume PAS-99, 1980, coauthored with R. Jenkins, R Babb and W. Bayless of the Tennessee Valley Authority.

"Generation System Planning Under Load Forecast Uncertainty", IEEE Transactions on Power Apparatus and Systems, Volume PAS-100, 1981.

"Maintenance Scheduling Under Uncertainty", IEEE Transactions on Power Apparatus and Systems, Volume PAS-100, 1981.

"Sensitivity Study of the Cumulant Method of Calculating Generation System Reliability", IEEE Transactions on Power Apparatus and Systems, Volume PAS-100, 1981.

"Maintenance Scheduling for Generation System Planning", IEEE Transactions on Power Apparatus and Systems, 1981.

"Production Costing for Long-Range Generation Expansion Planning Studies", IEEE Transactions on Power Apparatus and Systems, Volume PAS-101, 1982.

"Reliability Models: The Influence of Model Specification in Generation Expansion Planning", IEEE Transactions on Power Apparatus and Systems, Volume PAS-101, 1982.

"Probabilistic Production Costing: An investigation of alternative algorithms", Electrical Power and Energy Systems, coauthored with M. Caramanis and W. Fleck of Stone and Webster Corp., and S Daniel of Southern Company Services Inc., 1983.

"Modeling Generating Unit Size and Economies of Scale in Capacity Expansion with an Efficient, Real Number Representation of Capacity Additions", IEEE Power Apparatus and Systems, Vol PAS-103, coauthored with M. Caramanis and Leonid Charny of Stone and Webster Engineering Co., 1984.

"The Cumulant Method for Production Costing: Evaluations and Suggestions for the Practitioner", Conference proceedings on Electric Generation System Expansion Analysis, Ohio State University, 1981.

PROFESSIONAL EXPERIENCE

EnergyConnect, Inc.

2006 – Present

Director, Engineering Services: Lead consulting services organization to assist clients maximize revenues from demand response initiatives. Services include assessing and optimizing building and industrial control processes, selection of the most appropriate, risk-adjusted structured product and developing market participation strategies. Through working closely with clients, Jim identifies and implement operational changes that yield additional revenues through participation in the demand response programs, as well as energy savings resulting from remedying operation anomalies.

Clark Energy, Inc. (Broomall, PA)

1991 – 2006

President: Provide consultation on performance contracting proposals, cogeneration feasibility studies, and energy systems. Clients included ESCOs, performance contractors, electric and gas utilities, heat exchanger manufacturer, cogeneration companies, and boiler energy management company. ESCOs include Noresco, Energy Assets, CMS Viron Energy Services, Exelon, PPL Spectrum and Onsite Sycom. Services include representation in bid meetings, assist and develop sales plan, train technical staff, prepare proposals, evaluate technical and financial feasibility, calculate energy and operational savings, prepare financial analyses, estimate or obtain firm project costs, identify additional opportunities, and find unique solutions to turn around projects.

PECO Energy Company (Philadelphia, PA)

2001 – 2002

Senior Engineer: Qualify and quantify new business opportunities at customer sites for company's product and services. Provide technical input to marketing and sales departments before and after launch of new products and services including: web-based energy usage data and reports; electric load curtailment programs; competitive electric rates to shut down cogeneration plants; increase electric and gas loads with new and established technologies; two rate maximization initiatives for rates OP and RH; and electric infrastructure projects. Support includes generating proposals, estimating project costs, calculating financial and energy savings, and performing energy audits.

- Exceeded company revenue goals in programs I supported, in one case by 3300%.
- Created and implemented training for sales department and call center personnel.

CONNECTIV (Newark, DE)

1996 - 1998

Energy Consultant: Reported to Director of Energy Efficiency Services. Surveyed in excess of 75 facilities. Developed and implemented processes and procedures in order to enable the start-up of Performance Contracting at an electric utility. Performed energy audits and generated proposals. Trained energy engineers and sales personnel in the theory and practice of Performance Contracting. Assisted sales associates to develop sales approach for target markets.

- Created Excel and Word templates of energy reports and energy savings calculations which decreased turn around time for proposal and report generation.

- Created and developed proposals for Performance Contracting which took into account deliverability and risk management.

Proven Alternatives (Bala Cynwyd, PA)

1992 - 1993

Program Manager: Reported to Regional Manager. Surveyed over 30 facilities. Conducted energy audits of customer facilities to determine feasibility of energy conservation measures. Measures included: lighting, variable speed drives, energy efficient motor upgrades, process changes, energy management systems, cogeneration systems and HVAC equipment retrofits. Prepared cost estimates for measures. Wrote technical and financial sections of proposals. Specified equipment and designed system changes.

CFM (Paoli, PA)

1986 - 1991

Engineering Manager: Reported to the president. Increasing responsibility from project engineer to engineering manager. Supervised 4 mechanical, electrical and chemical engineers. Supported sales, maintenance and manufacturing departments in organizational meetings and daily operations. Trained engineers and technicians in the installation and repair of cogeneration equipment. Established engineering department procedures and standards. Interfaced with electric and gas utility and environmental personnel for regulatory compliance.

Owens Illinois (Vineland, NJ)

1984 - 1985

Project Engineer: Report to Assistant Plant Engineer and supervised all phases of projects in: energy, water and compressed air conservation; heating, ventilation and air conditioning; building construction; dust control; hazardous waste identification and disposal. Performed design, cost estimation and installation supervision of craft union and contractor labor.

A.C. MANUFACTURING, Cherry Hill, NJ

1982 - 1983

Design Engineer: Reported to Engineering Manager and prepared engineering submittals on orders for process cooling equipment. Designed mechanical, electrical and control systems for this manufacturer of process cooling equipment.

EDUCATION

St. Joseph's University (Philadelphia, PA)

1994

Masters of Science: Education

Drexel University (Philadelphia, PA)

1982

Bachelor of Science: Mechanical Engineering

PROFESSIONAL MEMBERSHIPS AND CERTIFICATIONS

President, Vice President, Board Member of Greater Philadelphia Chapter of Association of Energy Engineers,

Member of American Society of Heating, Refrigerating, and Air Conditioning Engineers

Certified Energy Manager, 1998

4) locations of company offices that will service this contract.

EnergyConnect will principally service the contract through its Richmond, VA office for all participant activities. PJM settlements and payment processes are delivered from EnergyConnect's San Jose, CA office.

4. Vendors offering proposals to supply Demand Response Services must provide a narrative containing short discussions addressing the following issues.

1) A general overview of how the contractor will perform the requirements of this proposed contract.

Please refer to sections 2.2 and 2.10 for detailed discussion of how EnergyConnect will perform the contract requirements.

2) Other issues the Offeror thinks are important.

Please refer to Section 17 of this proposal for a discussion of additional issues that EnergyConnect believes is important.

9 EVALUATION AND AWARD CRITERIA

No response required.

- 1) Experience and qualifications of the Offeror in the particular disciplines covered by the solicitation. Qualifications and experience of assigned staff members, the capability, integrity and reliability of the Offeror.
- 2) Plans and approach for the provision of services.
- 3) Commitment for utilization of Small, Women-Owned and Minority Businesses. Scoring relative will be solely on the basis of the Offeror's commitment to utilize small businesses and businesses owned by women and minorities through partnerships, joint ventures, subcontracts, or other contractual opportunities.
- 4) The Offeror's firm's references from clients which are comparable to the Commonwealth
- 5) The Offeror's financial proposal

- 6) The contractual terms, between the Commonwealth of Virginia and the Selected Offeror, which would govern the relationship.

9.1 SCORING:

No response required.

10 AWARD

Selection shall be made of two or more Offerors deemed to be fully qualified and best suited among those submitting proposals on the basis of the evaluation factors above. Negotiations shall be conducted with the Offerors so selected. Price shall be considered, but need not be the sole determining factor. After negotiations have been conducted with each Offeror so selected, the agency shall select the Offeror(s) which, in its sole opinion, has made the best proposals, and shall award the contract to that Offeror(s). The agency may cancel this Request for Proposals or reject proposals at any time prior to an award, and is not required to furnish a statement of the reason why a particular proposal was not deemed to be the most advantageous. (Section 2.2-4359D, Code of Virginia.) Should the Purchasing Agency determine in writing and in its sole discretion that only one Offeror is fully qualified, or that one Offeror is clearly more highly qualified than the others under consideration, a contract may be negotiated and awarded to that Offeror. The award document will be a contract incorporating by reference all the requirements, terms, and conditions of this solicitation and the Contractor's proposal as negotiated.

No response required.

11 IDENTIFICATION OF PROPOSAL ENVELOPE (RFP Item 12)

No response required.

12 EXPANSION OF THE TARGET (RFP Item 13)

No response required.

13 AUTHORITIES (RFP Item 14)

No response required.

14 SMALL, WOMEN AND MINORITY-OWNED BUSINESS SUBCONTRACTING AND EVIDENCE OF COMPLIANCE (RFP Item 15)

Where it is practicable for any portion of the awarded contract to be subcontracted to other suppliers, the contractor is encouraged to offer such business to small, women,

and/or minority-owned (SWAM) businesses. If SWAM subcontractors are used, the prime contractor agrees to report the use of SWAM subcontractors by providing the purchasing office at a minimum the following information: name of firm, phone number, total dollar amount subcontracted, category type (small, women, or minority-owned), and type of product/service provided.

SWAM Business Statement (RFP Item 15)

EnergyConnect is a subsidiary of a publicly-traded corporation, and is not a SWaM Business.

If so desired by the Commonwealth of Virginia, EnergyConnect will direct meter installation to Westridge Energy, LLC, a SWAM business. EnergyConnect and Westridge Energy have had an ongoing business relationship in VA since 2005, with Westridge providing meter data collection devices installation for a majority of EnergyConnect's VA clients.

Westridge Energy, LLC, formed in 2001, provides energy services to industrial, commercial and governmental organizations. They help customers take the guess work out of energy management and cost containment by providing energy accounting, monitoring, and control services.

Westridge Energy, LLC meets the Commonwealth's definition of a SWaM Enterprise. Westridge Energy has completed the necessary certification of the Virginia State Department of Minority Business Enterprise to qualify as a SWAM business.

15 CONTRACT ADMINISTRATION:

The Contractor shall attempt to resolve any contract problems with the Participating Agency with which the problems have been experienced. If the problems are unable to be satisfactorily resolved with the Participating Agency, the Contractor shall refer the matter to the Contracting Agency for resolution. Interpretation of contract requirements can be made only by the Contracting Agency.

No response required.

16 METHOD OF PAYMENT:

Provide payment processing services for all savings from demand response transactions. Ensure payment of agreed upon % of savings within 30 days of the first of the month directly after the date of the transaction. Example: transaction March 15th. Check should be received no later than 30 days from April 1st (April 30th). Payment shall be made to the Government Entity on whose behalf the curtailment was executed. (RFP Item 17)

Payment (RFP Item 17)

Payment will be made within 30 days of the first of the month directly after the date of the physical or financial PJM transaction.

EnergyConnect will typically provide an estimate of amounts the Commonwealth of Virginia's Authorized Users earn from demand response activities within two business days of receipt of meter data from the Participating Agencies or Dominion Virginia Power. These amounts must be verified by both PJM and Dominion Virginia Power. Section 3.10.7 contains an example of the self-service portal's display of this information.

Other issues (RFP Item 8.4.b)

17 Additional Materials (RFP Item 8.4.b)

This section contains supplemental information that will help the Commonwealth of Virginia' evaluation team understand the range of opportunities that are available in PJM's demand response programs and also demonstrate EnergyConnect's ability to deliver the benefits of those opportunities to the Commonwealth of Virginia. It provides background information regarding Demand Response, the infrastructure that is required to capitalize on DR opportunities, how DR impacts facilities engineering and operations, and the financial benefits that result from DR.

Also included in this section is a sample contract, for the Participating Agencies' consideration.

17.1 *Demand Response Background*

The principal motivation behind DR is to encourage large energy users to reduce or shift their electric demand during periods when aggregate electric demand and/or wholesale electricity prices are extraordinarily high. PJM, operator of the high voltage electric transmission grid in Virginia, sponsors several programs that pay incentives to large electricity users when they shift or curtail electric demand. PJM relies on EnergyConnect and other third-party aggregators known as Curtailment Service Providers (CSPs) to enroll customers; provide technical support and operating expertise; and pay customers for their participation.

Participating in a DR program allows the Commonwealth of Virginia and Virginia's other electricity consumers to realize a number of important benefits:

- Provides a funding mechanism for facility enhancements such as continuous commissioning, building control system upgrades, energy efficiency projects, purchasing renewable energy certificates or carbon credits, as well as for general fund purposes.
- DR helps limit increases in retail electricity prices by minimizing or even avoiding the use of the most expensive power plants that are typically operated to meet electric demand on those very hot or very cold days when electric demand and wholesale prices are highest.
- DR helps keep the air cleaner by reducing the use of the dirtiest power plants.
- If customers respond in a consistent, reliable fashion, DR reduces or defers the need for new power plants and electric transmission lines, which helps control the price of electric service, preserves wilderness and national park views, and limits emissions of CO₂ and other harmful pollutants.

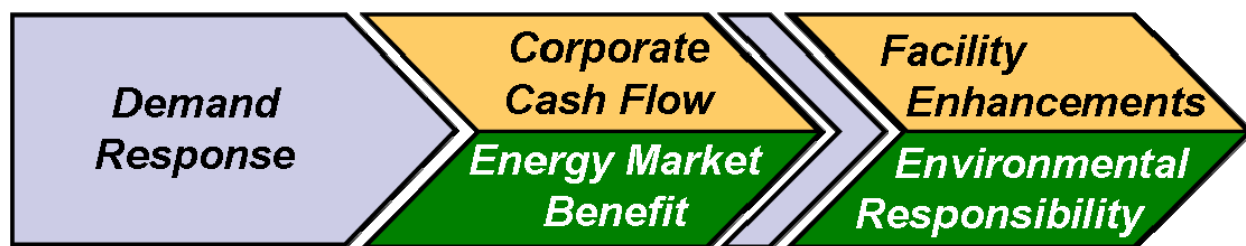


Figure 17-1 Benefits of Demand Response

On any given day, the Commonwealth of Virginia has two opportunities to sell DR in connection with PJM's Economic Load Response Program that are entirely voluntary, entirely within its control, and which compensate the Commonwealth of Virginia based entirely on wholesale prices.

- In the simplest case, the Commonwealth of Virginia uses its best efforts to reduce demand in a few hours on selected days when spot or real-time, wholesale prices are expected to be high. Generally speaking, it is paid for best efforts load reductions at the prevailing spot wholesale price. This option, which we refer to as Real Time Demand Response, has the advantage of simplicity, but it requires making educated decisions about when wholesale prices are likely to be high on any given day and then acting accordingly. If prices on any given day turn out not to be as high as anticipated, then the Participating Agencies' payments won't be very large, but there are no penalties or risks for failing to reduce load, either.
- There is a second option for providing DR in which the Commonwealth of Virginia submits binding load reduction offers for the following day's PJM wholesale electricity auction. If the Participating Agencies' offer is accepted, it is paid the market price and it is expected to reduce load by the amount contained in its accepted offer. However unlike the Real Time option, there are financial consequences for failing to reduce load in accordance with an offer that's been accepted by PJM. This option, also known as Day Ahead Demand Response, has the advantage of providing some price certainty so that the Commonwealth of Virginia knows in advance how much it will be paid before it actually makes any load reductions, but it also carries an obligation to perform or forfeit benefits.

There are two other potentially beneficial ways the Commonwealth of Virginia can sell DR in connection with PJM Demand Response programs. They are invoked at PJM's option rather than at the Participating Agencies' option, and the trigger mechanism in both cases is based on grid reliability rather than wholesale electricity prices. One that is not yet available in Virginia pays participants a monthly fee if they agree to reduce load for up to 30 minutes on ten minutes notice when called. Known as Standby Reserve Service, or SRS, it requires electric meters that record electricity usage at one minute intervals and is best suited to sites with either fast-starting standby generation or large electricity-consuming devices like electric chillers that can be quickly shut off for up to 40 minutes without causing inconvenience. Several EnergyConnect participants in the Philadelphia area and in Chicago currently provide SRS. Another that will be available for summer of 2008 called Interruptible Load for Reliability program, or ILR, pays participants an annual fee if they agree to reduce load for up to several hours per day whenever PJM determines there may be an emergency situation that requires involuntary load interruptions. The amount of the standby fee is determined by an annual auction and is expected to be between \$15 and \$30 per kW of committed reduction per year. Both of these options have the advantage of providing more certainty about the level of payments the Commonwealth of Virginia can expect to receive, though they also limit the Participating Agencies' discretion over the timing and magnitude of load reductions.

In Virginia, the purely voluntary Real Time Demand Response and the Day Ahead Demand Response options are the Participating Agencies' best initial choices to gain experience and become comfortable with the operational and financial implications of DR. They are not mutually exclusive and EnergyConnect has devised a strategy for utilizing them concurrently. SRS and ILR limit the Participating Agencies' flexibility with respect to DR implementation and in any event they are not available to the Commonwealth of Virginia at the present time.

17.2 Demand Response Infrastructure

Since electric meters only measure actual usage, DR programs must estimate how much electricity would have been used if there had been no load reduction at all. The term “Baseline Use”, or “Baseline” refers to a customer’s deemed electricity usage in the absence of any load reduction. Simply stated, the formula for determining Baseline Use looks back at the last ten weekdays with no load reduction and uses the five days in that sample with the highest electricity usage to calculate an average electricity usage for each hour. This average becomes the Baseline Use.

In order to participate in any DR program, the Commonwealth of Virginia must have meters in place that record electricity usage on one hour intervals. These interval meters are required because the wholesale price of electricity changes from one hour to the next and because Baseline Use is calculated for every hour of the day, so all payments are calculated on an hour-by-hour basis. Load reductions, which represent the difference between Baseline Use and metered usage, are measured at the utility account level in order to determine payments.

Generally speaking, the institutions of the Commonwealth of Virginia that have their own submetering systems also have the equipment and software to package and transmit a file with all the data EnergyConnect will need. EnergyConnect accepts the data in a variety of forms, including the ubiquitous “comma separated values” or CSV format, structured files with headers and XML. The data transport mechanism can be via FTP, push, pull, or web services. If additional software or equipment is required, EnergyConnect can advance funds for their purchase and recover the cost through program revenues so that the Commonwealth of Virginia can realize immediate, positive cash flows from its Demand Response participation.

EnergyConnect will use interval data from each Authorized User to calculate payments due from PJM. However, data from those meters is probably collected by Dominion Virginia Power (DVP) once per month, which is not sufficiently timely for making daily decisions about whether to reduce load or not. Our experiences demonstrates that participants who have current load data and an up-to-date Baseline Use profile get better results (higher payments for their DR participation) than participants who don’t have access to this information. To ensure that the Participating Agencies have all the data they need to make good operating level decisions, EnergyConnect will collect and process hourly interval data from their meters and transmitted to EnergyConnect at the end of each day to calculate an up-to-date Baseline Use profile and an estimate of the current day’s and next day’s load. This process is described further in a subsequent section on Scope of Services.

As described in the following section on Load Reduction Strategies, it is essential that there be a single point of control over all major energy-using devices on the Participating Agencies’ campus. DR strategies can only be cost-effectively implemented on a sprawling campus if they can be accomplished without requiring someone to manually change temperature setpoints or turn equipment on and off. The Participating Agencies’ Building Automation System (BAS) is an essential element of this DR implementation.

17.3 Load Reduction Strategies

College campuses can employ a number of strategies to provide DR without adversely affecting research projects or impacting comfort for faculty, staff and students:

- Standby generators can be operated for a few hours where they are available, connected to large enough loads, and environmental regulations permit their use for other than emergency situations.
- Thermal energy storage (TES) in the form of ice or chilled water is particularly well-suited to shifting electric demand from daytime hours where it is expensive to night-time hours

where it is relatively cheap. EnergyConnect has helped several participants with TES systems generate value from an otherwise dormant asset by using them to provide DR.

- Indoor temperatures can be raised and lowered to reduce energy use for a few hours across peak demand periods. For buildings that are not occupied around-the-clock, a summer precooling strategy that lowers indoor temperatures well below normal comfort levels at night can use the building structure and furnishings to store energy that is released during the day, thereby lowering on-peak electricity use.
- Lighting levels may be reduced during periods of high wholesale prices. Lighting levels may be realized through turning off lighting and/or use of dimmable lighting ballasts.

While it is possible to implement these load reduction strategies manually, it's neither practical nor cost-effective. A control system that allows adjustments to be made and/or programmed from a single workstation is an essential element of a successful DR implementation.

Campus facilities always remain under the control of the Participating Agencies' facilities operations staff. Each day EnergyConnect provides the Participating Agencies' staff with an outlook for prices, an updated Baseline Use profile, and an estimate for the day's electric demand. The Commonwealth of Virginia can handle all of the notification and offer submissions itself using a web-based application provided by EnergyConnect, or EnergyConnect can prepare them on the Participating Agencies' behalf.

17.4 Cash Flows

Participants place a high value on generating positive cash flows from the outset. If an audit reveals that the Commonwealth of Virginia's Participating Agencies need to acquire additional software, data recorders or other equipment in order to provide DR, EnergyConnect will advance funds for this purpose that would be recovered from the Participating Agencies' share of program revenues.

EnergyConnect will estimate the amount of any DR benefits the Commonwealth of Virginia can expect to receive for each day shortly after it receives the interval meter data for that day. Although it is subject to revision upon receipt of interval meter data from DVP, the next-day estimate serves several important purposes:

- It provides the Participating Agencies' facility operations staff with a short-term scorecard by which they can measure their ability to profitably deliver DR.
- It provides the kind of immediate feedback that is essential to successfully engaging the Participating Agencies' management and staff.
- It provides the Participating Agencies' management with a current estimate of program benefits.
- Taken together with current Baseline Use data, it provides a solid foundation for better decision-making to fine-tune load shedding strategies.

The Commonwealth of Virginia can track benefits by viewing them on a dedicated, secure web page provided by EnergyConnect. To the best of our knowledge, EnergyConnect's ability to estimate and display benefits immediately upon receipt of meter data is unique among all of the CSPs that work with customers in the PJM region.

EnergyConnect's participants typically start seeing benefits immediately, with the level of benefit depending on season (larger in summer and winter, smaller in spring and fall).

Exhibit A – Participating Facility Registration

1. Facility Name:	_____
2. Facility Address:	_____ _____ _____
3. Legal Entity Name:	_____
4. FEIN:	_____
5. Energy Supplier:	_____
	Tariff ¹ : _____
Local Account Contact Name:	_____
Phone Number:	_____
Email Address:	_____
6. Electricity Distributor:	_____
	Tariff: _____
Local Account Contact Name:	_____
Phone Number:	_____
Email Address:	_____
Electricity Service Account Number:	_____
Electricity Meter Number:	_____
7. Participant's Engineering / Operations Contact	
Contact Name:	_____
Phone Number:	_____
Email Address:	_____
8. Participant's Contractual Contact	Same as Above <input type="checkbox"/> or fill out below if different
Contact Name:	_____
Phone Number:	_____
Email Address:	_____
9. Participant's Funds Transfer Contact	Same as Above <input type="checkbox"/> or fill out below if different
Contact Name:	_____
Phone Number:	_____
Email Address:	_____

¹ This is the company that supplies electric energy to this property. If different from the electricity distributor, please provide a copy of the supply contracts price and delivery details.

10. Make Checks Payable To _____

11. Mail Checks To

Attention: _____

Company Name: _____

Address: _____

City, State, Zip: _____

Please also fill out and sign the attached:

- IRS W-9 form

In addition to the signed contract and completed forms, please include the following information:

- Copy of a recent electricity bill, if not provided previously.
- Copy of the Energy Supply contract, if not provided previously. At a minimum, the transmission and pricing portions of the contract must be included.

Form W-9 (Rev. November 2005) Department of the Treasury Internal Revenue Service	Request for Taxpayer Identification Number and Certification	Give form to the requester. Do not send to the IRS.
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Print or type
See Specific Instructions on page 2

Name (as shown on your income tax return)	
Business name, if different from above	
Check appropriate box: <input type="checkbox"/> Individual/ Sole proprietor	<input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Other ▶
Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
City, state, and ZIP code	
List account number(s) here (optional)	

Part I

Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Social security number <div style="display: flex; justify-content: space-around; font-size: x-small;"> </div>	Employer identification number <div style="display: flex; justify-content: space-around; font-size: x-small;"> </div>
OR	

Part II

Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. person (including a U.S. resident alien).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. (See the instructions on page 4.)

Sign Here

Signature of U.S. person ▶

Date ▶

Purpose of Form

A person who is required to file an information return with the IRS, must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

U.S. person. Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee.

In 3 above, if applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

For federal tax purposes, you are considered a person if you are:

- An individual who is a citizen or resident of the United States,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States, or
- Any estate (other than a foreign estate) or trust. See Regulations sections 301.7701-6(a) and 7(a) for additional information.

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

- The U.S. owner of a disregarded entity and not the entity,

Additional instructions to this form are available upon request.

ATTACHMENT A

OFFEROR'S DATA SHEET

1. **QUALIFICATIONS OF OFFEROR:** The Offeror must have the capability and capacity in all respects to fully satisfy all of the contractual requirements.

2. **VENDOR'S PRIMARY CONTACT:**

Name: George Barnes Phone: 804-343-0978 Cell: 804-938-3151

3. **YEARS IN BUSINESS:** Indicate the length of time you have been in business providing this type of service.

9 Years

4. **VENDOR INFORMATION:**

FIN OR FEI Number: 20-3534273

(If Company, Corporation, or Partnership)

SSN: _____

(If Individual)

5. **REFERENCES:**

- A. Indicate below a listing of at least four (4) current accounts, either commercial or governmental, that your company is servicing. Include the length of service and the name and phone number of the person the purchasing agency has your permission to contact.

17.4.1.1 CLIENT'S NAME & ADDRESS	LENGTH OF SERVICE	CONTACT PERSON AND TELEPHONE NUMBER
Thomas Jefferson University Philadelphia, PA	Seventeen Months	Randy Haines 215-503-6099
University of Pennsylvania Philadelphia, PA	Sixteen Months	Gerry McGillian 215-543-4430
Drexel University Philadelphia, PA	Twenty Months	Hans Greene 215-895-1921
Hahneman University Philadelphia, PA	Fourteen Months	Phil Van Cleve 215-762-3519
Villanova University Philadelphia, PA	Three Months	Steve DiValerio 610-519-6902
Brooklyn Army Terminal Brooklyn, NY	Twelve Months	Mayra Ortiz 212-312-3636

ATTACHMENT B

Small Business Subcontracting Plan

Definitions

Small Business: "Small business " means an independently owned and operated business which, together with affiliates, has 250 or fewer employees, or average annual gross receipts of \$10 million or less averaged over the previous three years. Note: DMBE-certified women- and minority-owned businesses shall also be considered small businesses when they have received DMBE small business certification.

Women-Owned Business: Women-owned business means a business concern that is at least 51% owned by one or more women who are citizens of the United States or non-citizens who are in full compliance with United States immigration law, or in the case of a corporation, partnership or limited liability company or other entity, at least 51% of the equity ownership interest is owned by one or more women who are citizens of the United States or non-citizens who are in full compliance with United States immigration law, and both the management and daily business operations are controlled by one or more women who are citizens of the United States or non-citizens who are in full compliance with the United States immigration law.

Minority-Owned Business: Minority-owned business means a business concern that is at least 51% owned by one or more minority individuals or in the case of a corporation, partnership or limited liability company or other entity, at least 51% of the equity ownership interest in the corporation, partnership, or limited liability company or other entity is owned by one or more minority individuals and both the management and daily business operations are controlled by one or more minority individuals.

All small businesses must be certified by the Commonwealth of Virginia, Department of Minority Business Enterprise (DMBE) to participate in the SWAM program. Certification applications are available through DMBE online at www.dmbc.virginia.gov (Customer Service).

Bidder/Offeror Name: EnergyConnect, Inc.

Preparer Name: George Barnes

Date: July 13, 2007

Instructions

- A. If you are certified by the Department of Minority Business Enterprise (DMBE) as a small business, complete only Section A of this form. This shall include DMBE-certified women-owned and minority-owned businesses when they have received DMBE small business certification.
- B. If you are not certified by DMBE as a small business and plan to subcontract part of this contract with a DMBE certified business, complete only Section B of this form.
- C. If you are not certified by DMBE as a small business and cannot identify any subcontracting opportunities to subcontract part of this contract with a DMBE-certified business, only provide the information requested in Section C of this form.

Section A

If your Offeror(s) is certified by the Department of Minority Business Enterprise (DMBE), are you certified as a **(check only one below)**;

_____ Small Business

_____ Small and Women-owned Business

_____ Small and Minority-owned Business

Certification number: _____ Certification
date: _____

Section B

Populate the table below to show your Offeror(s)'s plans for utilization of DMBE-certified small businesses in the performance of this contract. This shall include DMBE-certified women-owned and minority-owned businesses that meet the small business definition and have received the DMBE small business certification. Include plans to utilize small businesses as part of joint ventures, partnerships, subcontractors, suppliers, etc.

B. Plans for Utilization of DMBE-Certified Small Businesses for this Procurement

Small Business Name & Address DMBE Certificate #	Status if Small Business is also: Women (W), Minority (M)	Contact Person, Telephone & Email	Type of Goods and/or Services	Planned Contract Involvement	Planned Annual Contract Dollar Expenditure Amount
Westridge Energy Consulting LLC 123 Camden Place Harrisonburg, VA 22801 Cert# 662478		Robert Jennings 703-609-8874 bjennings@westridgeenergy.com	Metering equipment and installation	Survey, engineer, and installation of required metering	To be determined based on metering requirements at each location

2. List research efforts conducted by your business in the past to locate DMBE-certified small businesses by advertising in publications or in the classified section of the newspaper where small businesses are likely to see it. List specific publications and dates.
3. List small business outreach meetings, conferences, or workshops conducted by your Offeror(s) to locate DMBE-certified small businesses—including the dates, participation numbers, and results.
4. Provide documented correspondence (i.e., certified mail, email, receipt of fax transmissions, etc.) to small businesses from the lists provided by DMBE and other outreach agencies and organizations which indicates your solicitation of such for utilization of subcontracting opportunities on other contracts for which your business has competed.
5. List areas of work which your business has subcontracted with DMBE-certified small businesses for upcoming contracts—including the name of the business, certification number, dates, dollar amounts, and percentages on a per contract basis.
6. Provide documentation of any assistance offered to interested small businesses in obtaining bonds, lines of credit, and/or insurance for any present or past contracts your business has in place.
7. Provide documentation of follow-up on initial contacts with DMBE-certified small businesses (e.g., telephone call logs, emails, certified letters, etc.). Be sure to list the small business name and dates of contact.

ATTACHMENT C

PROPRIETARY/CONFIDENTIAL INFORMATION IDENTIFICATION RFP # 86 – Folder #15843

SECTION/TITLE	PAGE NUMBER(S)	REASON(S) FOR WITHHOLDING FROM DISCLOSURE
Web-based Demand Response (RFP Item 2.10.f) Real Time Demand Response Notification	13	"Virginia Public Procurement Act; Section 11-52 (D)". Unauthorized disclosure of such information would violate the Trade Secrets Act 18 U.S.C. 1905
Day Ahead Demand Response Notification (RFP Item 2.10.f)	14	"Virginia Public Procurement Act; Section 11-52 (D)". Unauthorized disclosure of such information would violate the Trade Secrets Act 18 U.S.C. 1905
Baseline Use Reconciliation (RFP Item 2.10.g)	15	"Virginia Public Procurement Act; Section 11-52 (D)". Unauthorized disclosure of such information would violate the Trade Secrets Act 18 U.S.C. 1905
Revenue Reporting (RFP Item 2.10.g)	16	"Virginia Public Procurement Act; Section 11-52 (D)". Unauthorized disclosure of such information would violate the Trade Secrets Act 18 U.S.C. 1905
Wholesale Price Grid (RFP Item 2.10.g)	17	"Virginia Public Procurement Act; Section 11-52 (D)". Unauthorized disclosure of such information would violate the Trade Secrets Act 18 U.S.C. 1905

Identify the reason for withholding from disclosure by applying the applicable code from below and/or by written explanation.

- A.** This page contains information relating to "trade secrets", and "proprietary information" including processes, operations, style of work, or apparatus, identify, confidential statistical data, amount or source of any income...of any person (or) partnership. See "Virginia Public Procurement Act; Section 11-52 (D)". Unauthorized disclosure of such information would violate the Trade Secrets Act 18 U.S.C. 1905.
- B.** This page contains proprietary information including confidential, commercial or financial information which was provided to the Government on a voluntary basis and is of the type that would not customarily release to the public. See "Virginia Public Procurement Act, Section 11-52 (D); 5 U.S.C. 552 (b) (4); 12 C.F.R. 309.5(c) (4)".
- C.** This page contains proprietary information including confidential, commercial or financial information. The disclosure of such information would cause substantial harm to competitive position and impair the Government's ability to obtain necessary information from contractors in the future. 5 U.S.C. See "Virginia Public Procurement Act, Section 11-52 (D); 552 (b) (4); 12 C. F. R. 309.5(c) (4)".